

C9800/ES3640e NBC 2
Product Information Document

ETSC: Customer Support
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Rev 3.0

European Technical Support

Document Change History

Rev	Date	Detail	Approval
1.0	5/6/06	First Release	Peter Hird/Iain Bowman
2.0	19/6/06	Minor changes to layout to help clarify, table of cutin details added date changed on front cover from “June” to “July”	Peter Hird/Iain Bowman
3.0	18/7/06	Updated cut in serial number table and fixed formatting	Peter Hird/Iain Bowman

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1.0 What is NBC 2?

NBC 2 for the C96/9800/ES3640e is a range of modifications to the current product to ensure that it complies with the RoHS Directive.

The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive will ban the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants from 1 July 2006.

Some firmware, hardware and software changes have been made to our A3 products to accommodate this change.

2.0 How do I identify if I have an NBC 2 unit?

As the NBC 2 version of the C9800/ES3640e series will have the same product name as the original version the only way to identify which version of unit is installed is to perform a series of visual checks.

2.1 Check Serial/Lot no:

Here are the cut in details for RoHS compliance.

Product Top Level Part Number	Products Description	Scheduled Configuration Date	RoHS (NBC 2) Cut-in Serial Number
01149301	C9800 HDN - Multi	14/07/2006	66EY4000629K
01164001	C9800 HDTN - Multi	10/07/2006	67FJ4000353K
01149401	C9800 MFP - Multi	17/07/2006	67FL4000841K
01149601	C9800 GA - Multi	24/07/2006	67EZ4000194K
01149701	C9800 GA MFP - Multi	07/07/2006	67FM4000161K
01167601	ES3640E - Multi	22/06/2006	66FA4000294K
01167701	ES3640E MFP - Multi	12/07/2006	67FW4000547K

2.2 Check location of Ethernet socket on CU board:

The current CU board (Aspen) has the Network socket in the position shown below:



If the unit is RoHS compliant it will have the Aspen-2 CU board fitted and the Network socket will have moved to the new location shown below:



On the Aspen-2 CU board the location of the network socket is closer to the centre of the side plate and the Centronics (Parallel) port. It can also be noted that there are three grills visible above the Network port on the new board whilst previously there was only one.

3.0 Hardware changes

3.1 Parts Changed for NBC2

- CU Board
- RAM DIMMs
- CU Board Fans
- Network Card – on board from NBC2
- Rear Cover Plate (CU)
- Scanner – NBC1 unit will only work with pre ROHS scanner
 - NBC2 will work with either pre or post ROHS scanner
- MFP Controller board (Banyan)
- HDD 40gb (NBC1 clipped to 20gb). The HDD contents will be the same for both GA and non GA versions (see GA activation).
- ODC/ETSC will not support upgrade from NBC1 to NBC2

How do I tell whether or not my scanner is RoHS compliant?

It is possible to do this by checking the serial number on the back of the unit:

Old (with lead) --- BExxxxxxxxxA0

New (without lead) --- BExxxxxxxxxB0

What is a "Clipped" HDD?

In the original C9800 the HDD size was 20GB and this was the maximum storage area available to the system. When stock of 20GB HDDs became low Oki moved to using 40GB HDD but "clipped" them so that only 20GB was available. With the new firmware a 40GB HDD will be installed and all of this storage area will be available to use.

3.2 Part numbers

	NBC1	NBC2
Base Unit	42930721	43360921
HDD	42936006	42936006
MFP Controller Board	42887501	42887502
Scanner	42960902	42960912
MFP Upgrade kit	01166201rev7	01166201rev8

CU Board Fans	42925201	43364601
Rear Cover Plate	42781101	43456102
EEPROM C9800	43258608	43451308
EEPROM C9800GA	43258609	43451309
EEPROM ES3640GA	43258610	43451310
CU Board	42887501	42887502
512Mb Memory DIMM		43363314
Key Chip (GA)		42968803
Key Chip (non GA)		42968802

3.3 Compatibility

Will the following NBC2 parts work in an NBC1 unit?

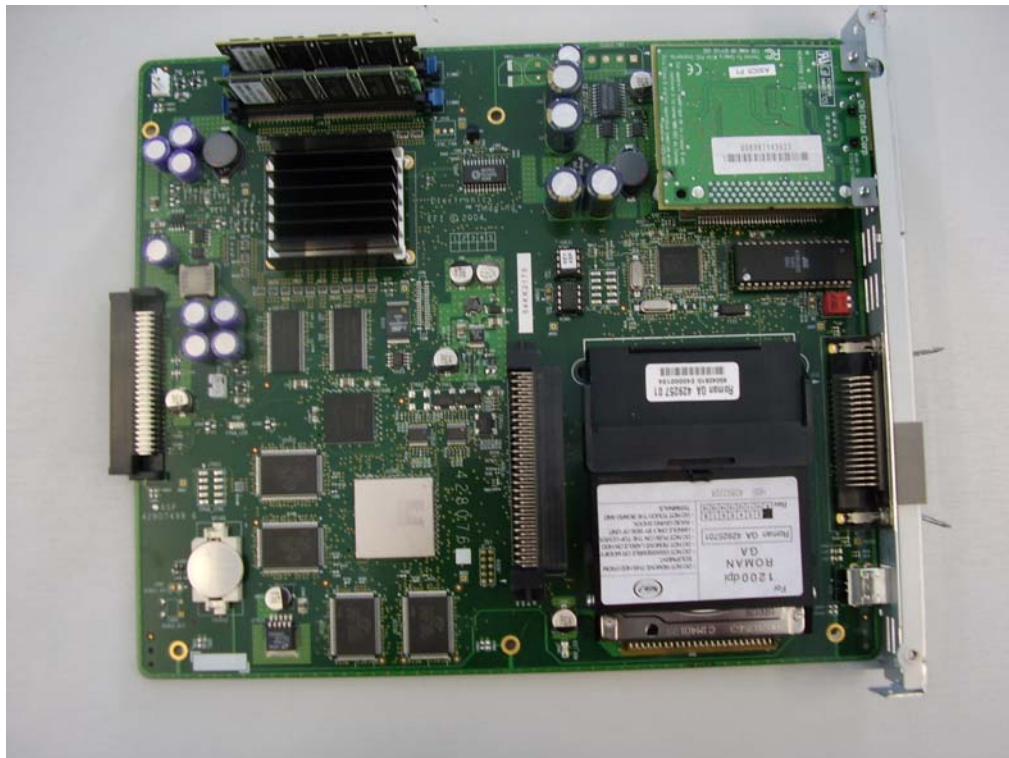
CU Board	NO
Key Chip	NO
HDD	NO
Memory DIMM	NO
MFP Controller Board	NO
Scanner	NO
MFP Upgrade kit	NO

Will the following NBC1 parts work in an NBC2 unit?

CU Board	NO
Key Chip	NO
HDD	NO
Memory DIMM	NO
MFP Controller Board	NO
Scanner	YES
MFP Upgrade kit	YES

3.4 Comparison of NBC1 (Aspen1) and NBC2 (Aspen2) CU boards

ASPEN1 CU Board



ASPEN2 CU Board



The most obvious visible differences between these two boards are:

- The Aspen 2 board (new) has the letters "AS 2" clearly marked on the top right corner of the board

- The Aspen 2 board has a large silver heat sink over it's CPU
- The Aspen 2 board has no additional network card board as the Ethernet port is integrated on the board itself.

Firmware changes

As the new CU board (Aspen II) uses a different processor and chip structure from the previous board (Aspen) it has been necessary to write new firmware.

The firmware written for the new board will contain bug fixes previously issued as patches for the previous firmware but no other additional features. The fixes introduced with this firmware include:

- If a user tried to staple too many pages in a job “Could Not Staple. Too Much Paper” was displayed but it disappeared automatically after about 0.2[s] before pushing ON-Line Button.
- **IMS Ref: [ETSC-6M9EMV]**
Toner dot count and Drum Count in the Print Control Log had the incorrect value.
- **QPR: OEL-3450**
If Glossy Media was selected, a PS error occurred and the job was not printed.
- **QPR: OEL-3470**
If "White Page Skip" was turned on, it could not be switched off again.
- **GMC Requirement (Spec Change)**
Format change of MFP statistics report.
 1. Added A4 / Letter conversion counter to Copy/Print Counters.
 2. Changed the count-up rule of Banner printing.
 3. Changed the count-up rule of Scan Counter.
- **QPR: OEL-3435**
System rebooted when Color Cal was executed and the printer's language was set as Portuguese.

The firmware is not compatible between the two boards, compatibility is as follows:

	Firmware	Aspen-I (lead)	Aspen-II (lead-free)
1	1.0	OK	NG
2	2.0	OK	NG
3	2.1	OK	NG
4	2.2	OK	NG
5	2.3	NG	OK

If I replace the HDD in a pre-NBC (Aspen) printer with a new HDD (v2.3 or later) what will happen?

The message "Checking system please wait 5 minutes" will be displayed followed by "Communication error" and the system will not boot.

If I place a HDD with v2.2 or lower firmware in an NBC 2 unit what will happen?

The message "Checking system please wait 5 minutes" will be displayed followed by "Communication error" and the system will not boot.

Any other changes?

Yes the HDD now has 40 GB of available storage (some space will be used by CU f/w) previously this was only 20 GB.

4.1 GA/Non GA HDD Activation

There will be only one version of firmware written to the HDD installed in each unit, whether this firmware is GA or non-GA will depend on whether or not the GA features have been 'Activated'.

What is activation?

Activation is a process where the CU board keychip data will be changed to unlock the full GA functionality of the printer's HDD.

Can anyone activate a GA HDD?

No. As there are additional royalty charges to be paid to EFI for GA units this procedure will be strictly monitored so that all activations are recorded. Key chip activation will only take place in OUK configuration. It will be necessary to buy a new key chip if a unit is to be changed from a non-GA to a GA printer.

If I replace the HDD in a GA unit what will happen, will it remain a GA printer?

Yes. If the new HDD image detects a GA activated keychip it will become a GA activated HDD. The boot sequence will take slightly longer during the conversion process.

If I place a GA enabled HDD into a non-GA unit what will happen?

The error message "Communication Error" will appear and the system will not fully boot. It is necessary to restore a clean image to the HDD to get around this problem.

5.0 HDD Replacement in the field

Firmware for the Aspen II board can be re-imaged in the field, this was not previously possible unless an upgrade was taking place.

With the new firmware it is possible to re-write firmware to an existing disk or to a blank HDD from CD.

Note:

If a new HDD is installed in the field the plastic casing from the existing (damaged drive) should be removed and placed over the new HDD. The purpose for case replacement is that this will ensure that all Oki printers still contain an EFI label and are following the licensing agreement.

6.0 Software changes and compatibility

New drivers have been released to support the RoHS compliant (NBC2) version of the product. The reason for the new driver release is that some PCs running Windows may not communicate correctly with the C9800 NBC 2 when using the current driver with a parallel port connection. In rare cases noise can be generated by the Windows PC and this can cause the printer to freeze or malfunction.

The problem only affects a small number of PC's where the Bios is set as Parallel Port= Compatibility mode. If the new driver is used or the Bios setting is Parallel Port = ECP then this problem will not occur.

The previous driver will work OK over other interfaces so installing a new NBC 2 unit on site in a location where C9800s and drivers are already installed should not be a problem as long as a network connection or USB connection is used.

	C9800	C9800	C9800	C9800 (NBC 2)	C9800 (NBC 2)	C9800 (NBC 2)
	Network	USB	Parallel	Network	USB	Parallel
Current driver	OK	OK	OK	OK	OK	Set Parallel Port=ECP in Bios
NBC 2 Driver (PS v1.6.40.1 or later and PCL v1.1.7 or later)	OK	OK	OK	OK	OK	OK